# dbWatch Control Center


*Document Changes*

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|---|---|---|
| *V1.0* | *Original Document* | |
| *V2.0* | *Update Original Document* | *07/21/2021* |
| *V3.0* | *Update performance pack* | *10/7/2022* |

## Content

# CHAPTER 1 INTRODUCTION

Today's enterprises are driven by data underlying all critical enterprise applications. The vast majority of these data are stored in various databases, which are often a complex mix of different versions of Oracle, MS SQL Server, MySQL, and other relational databases.

Today we expect all enterprise systems to be available 24x7 and with acceptable response times. Downtime can directly affect revenue and the ability to service customers. Downtime or Loss of data is not permitted. As criticality, volume, and demands grow, so does the cost of keeping these databases up to the task. Managing these databases has become a balancing act, attempting to balance cost, performance, flexibility, and risk.

**dbWatch Control Center** is a complete database management solution for efficient, proactive monitoring and managing large database estates, typically found in manufacturing, retail, government, healthcare, managed service providers, or other industries.

**dbWatch Control Center** allows *database administrators* to manage many databases on different database platforms with minimal time and effort while offering the flexibility, scalability, and functionality required in enterprise environments.

**dbWatch Control Center** gives *IT managers* the complete overview and tools to manage resources optimally, plan ahead and produce all reports and statistics needed for internal reporting and planning.

**dbWatch Control Center** is designed from the ground up to meet the challenges of today's service providers and IT departments, facing the challenge of managing a large number of old legacy and new database server instances running on multiple platforms and versions. The distributed architecture is designed to be maintenance-free, scale from monitoring a few instances to managing thousands, automate all routine tasks, provide complete resource overview and control and make the DBAs as efficient and productive as possible.

**dbWatch Control Center** provides managers with the insight and analysis required to plan, report, consolidate and optimize hardware use and software license cost. Fewer tools mean less cost and time spent on tools and training. Optimizing resources and making DBAs more efficient keeps costs under control. Complete insight and control reduce unwanted service interruption or degradation risks and simplify and improve reporting.

**dbWatch Control Center** offers:

- Complete database monitoring and management solution on the most common platforms and cloud databases.
- Increasing DBA efficiency up to 20% - 50% or more
- Scalable from a handful to thousands of instances
- Global views to give an overview of the entire database estate, resources, and performance
- Enable proactive monitoring and management of complex database environments.
- Automation of all monitoring and routine maintenance tasks
- Oracle and MS SQL Server licensing control and optimization
- Provide a flexible platform for customization to allow each enterprise to extend and customize dbWatch Control Center to suit their specific requirements. Complete source for all tasks and procedures included
- Fast ROI. Control Center can be deployed in hours and is easy to learn, so you can quickly start benefitting from improved performance and efficiency
- Offers role-based access controls, Kerberos, and encrypted connections for government, healthcare, financial, and others who require stringent security

# CHAPTER 2 DBWATCH FOR IT MANAGERS

Being responsible for operations, you are under constant pressure to increase productivity, control costs, and improve quality while minimizing risks. It would be best if you had solutions that will adapt to your business processes and be future-proof, handling whatever may come.

**Increase efficiency.** With Control Center, each of your database administrators can monitor and manage far more database instances and platforms, significantly and measurably increasing the efficiency of your department. Automation of routine tasks and ease of use improve DBA productivity. Using Control Center, we see DBAs managing 50 to 500+ instances each.

**Reduce risk.** A complete overview of all resources and real-time monitoring lets you see what is happening and prepare and prevent problems before they become an issue. Automation ensures all routine tasks are performed as scheduled every time and never forgotten or ignored.

**Better overview.** With many instances to manage, it's easy to lose insight into your environment, so we added extensive features for large estates:

- Global views for the complete overview of platforms, versions, performance, capacities, and status of all instances
- Functionality to tag, sort, group, and filter instances on platform, location, function, or other user-defined criteria in all views and reports. This will allow you to identify instance(s) that most need your attention, be it lack of resources, poor performance, high growth, or other reasons.

**Improve the quality of operations.** With ***Control Center***, problem areas are discovered earlier, and preventive actions can be initiated before critical situations arise. It gives a better overview of the entire database situation and the tools the database administrators need to drill down and analyze the performance and health of individual database instances.

**Comprehensive, configurable reporting.** With ***Control Center***, you can instantly produce advanced reports on your key performance indicators – uptime, availability, load, and response time. The dbWatch Control Center reporting engine is fully customizable to fit your specific requirements. Reporting can be per database instance, across clusters, or any other way you choose.

**Future proof.** ***Control Center*** is fully cross-platform and cross-version. We support most major database technologies, both open-source and commercial. Whether you are supporting a single or heterogeneous database environment, ***Control Center*** provides a single monitoring framework for all your databases and a standard solution for all your database administrators. On top of that, ***Control Center*** also supports multiple versions of the same database platform in the same interface, making managing legacy solutions and transitions to new versions easier.

**Fully Customizable.** Customization is the single ***Control Center*** feature that will benefit you directly more than any other. With ***Control Center***, you can fully customize your database monitoring jobs and views like no other solution allow. With a working knowledge of the native SQL procedure language, you can program dbWatch CC to monitor any database process customized to business processes and priorities. Apply this to the fully customizable Report Manager, and you have a powerful reporting engine for creating fully customized business, and IT reports.

**Fast Return on Investment.** With ***Control Center***, you can be up and running in less than a day and benefit from improved operations, better monitoring, and enhanced reporting. You feel the benefits of ***Control Center*** faster and gain more in the long run.

**Extensive security features, *Control Center,*** provides role-based access control, supports Kerberos, and can be used with encrypted connections and certificates, providing enhanced security and control.

**Sensible Licensing.** If you need a database monitoring solution, ***dbWatch Control Center*** will likely be one of your most profitable investments. We have a no-nonsense, simple-to-understand licensing policy based on the number of database instances you use. In addition, the lightweight Control Center architecture has minimal operating costs, requires no new investments in hardware, database middleware, or repository software, and has low bandwidth consumption.

# CHAPTER 3 DBWATCH FOR THE PROFESSIONAL DBA

As a professional DBA, you are expected to keep more and more systems running smoothly. You see complexity and workload increase daily, and you are expected to manage it all without extra resources. How can you cope?

The answer is better tool support, automation, simplification, and flexibility.

**Tool support.** With ***Control Center,*** you get all the functionality you need to manage all your instances in one single, easy-to-use solution. No longer will you need to install, operate and learn a large set of platform, version, or function-specific tools. Fewer tools mean less learning and managing and a simpler, more productive environment.

**Automation.** Routine tasks like checking status and log files, re-indexing, etc., can take considerable time. ***Control Center*** will automate most regular tasks for you. It will automatically perform all database maintenance tasks based on "best practices" learned from working with large enterprises over many years.

**Simplification.** What can be simpler: one solution, one tool to learn. No more juggling between different tools. Switch from monitoring to management to performance analysis in the same solution – no need to switch anymore.

**Better overview.** With many instances to manage, it's easy to lose overview, so we added extensive features to tag, sort, group, and filter instances in all views and reports. This will allow you to identify the instance(s) that most need your attention, be it lack of resources, poor performance, high growth, or other reasons.

**Flexibility.** If you have special requirements – and many have – you need the flexibility to modify or extend your tool to match your requirements. So we give you the platform and tools to do so.

This single ***Control Center*** feature will change your work life more than any other—the ability to create, modify, and fully customize your own monitoring procedures exactly how you like and in a programming language, you already know. To make this happen, we had to do a few things that no one else had done before:

1. Monitoring procedures are written in the native procedure language of each supported database (PL/SQL for Oracle, T-SQL for MS SQL and Sybase, etc.).
2. All monitoring code is open for you to read, change, or modify in any way you like.
3. Users can create fully customized monitoring procedures from scratch or modify the procedures we provide.
4. The ***Control Center*** Task Editor tool lets you develop, edit, and manage your monitoring alerts, jobs, and SQL procedures in an easy-to-use graphical interface.

This design opens up possibilities that no other solution can offer the advanced DBA. With ***Control Center***, you can monitor any database component, state, or process exactly how you want to, limited only by the database programming language itself.

If you can do it in your native procedure language, you can do it with ***Control Center***!

It is designed to quickly relieve the pressures you face as a DBA, with features that secure and automate your database management routines at the expert level. With ***Control Center*** installed, you'll be the authority, with documented control over all your databases and the reports to prove it!

**Out-of-the-box configurations.** ***Control Center*** comes with a complete set of monitoring jobs, pre-configured *according to best practices* for each supported database platform. The standard installation includes default thresholds and parameters that you can use to immediately start monitoring critical database components and processes, leaving you secure, knowing that your monitoring configuration will stand the test of any inspection.

**Easy to Use.** With an intuitive and uncomplicated GUI, Control Center provides an overview of all your database instances in a single, cross-platform interface. Fancy graphics and distractions have been kept in check to give you the relevant information you need to complete your job in a simple and efficient format when and where you need it.

With ***Control Center*** fully installed in a few hours, you are quickly up and running.

**Time-saving features.** We constantly focus on building a better product that helps DBAs stay productive and efficient. So we have features like database auto-discovery, which will help you discover all databases in your network and add them to ***Control Centers'*** management framework.

# CHAPTER 4 ARCHITECTURE

### Agent-less monitoring and management

***dbWatch Control Center*** supports two ways of monitoring and managing database servers:

- "Basic mode." No agents, software, or files must be installed on the database server instance, underlying operating system, or server.
- "Standard mode." A small schema is installed on the database instance.

In neither mode is any agent required. Installation and operation require only access to the database server.

### Distributed repository

The statistics collected are stored and distributed on each monitored instance, and automatic maintenance procedures ensure the log files and collected data are kept relevant and compact.

### Distributed and open platform

***Control Center*** is built on a unique architecture that provides the best possible capabilities for monitoring and managing heterogeneous database platforms.

Our design provides the most precise and relevant database monitoring information possible. With ***Control Center,*** you can modify any of the included monitoring procedures to suit your preferences better.

But we took it a step further—we designed ***Control Center*** so you'll have the power to design and develop your own monitoring procedures and jobs from scratch, fully customized to your needs, technical requirements, or your company's business logic.

This openness is not limited to the monitoring procedures; also, the Management module and Reporting module provide customers with the flexibility to develop and customize how they manage or report on their database systems.

***dbWatch Control Center*** is built on standard, three-tier client-server architecture, with database monitoring agents inside the database (dbWatch Engines), the application server (***dbWatch Control Center*** Server), and the client GUI (***dbWatch Control Center*** Monitor Client). In addition, ***Control Center*** includes extensions to support integration with third-party systems management solutions.

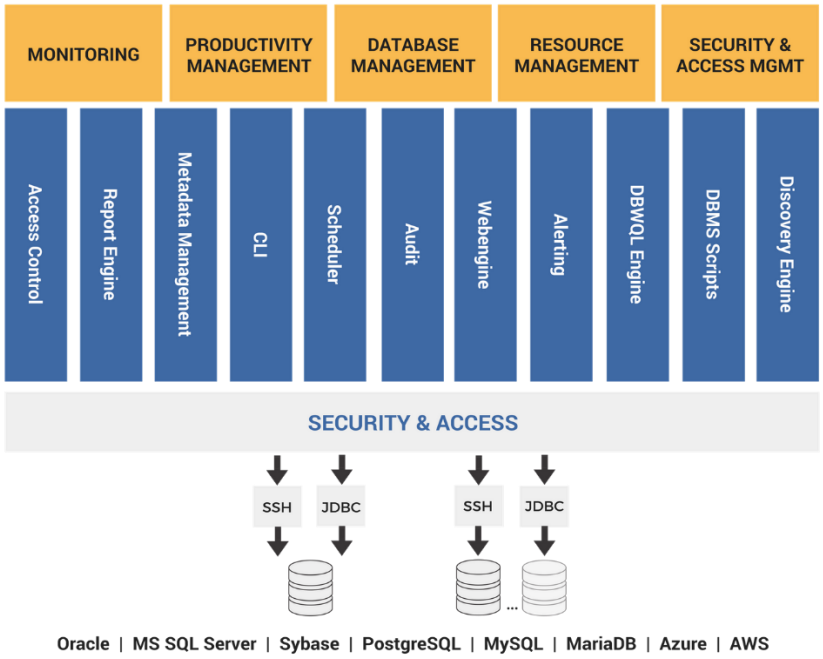



*Figure 1: dbWatch Enterprise Manager overview*

### dbWatch Engines

***dbWatch Control Center*** uses an **intelligent database schema** inside the database, called *dbWatch Engines*, for monitoring each database instance.

Each engine is populated with a set of monitoring jobs *defined by you* as relevant to monitoring your database instances.

***dbWatch Control Center*** comes with a broad range of advanced out-of-the-box monitoring jobs for each supported database platform. You can use these in their standard configurations, edit and modify them, or create your own fully customized jobs from scratch.

**Intelligent database schema.** Instead of using external agents with proprietary code, installed at the operating system level, the dbWatch engine is an intelligent database schema installed internally in the database instance being monitored, containing programmable logic, procedures, and routines for monitoring and data collection (at around 50 MB, they are completely non-intrusive and without any significant performance impact). This allows for rapid deployment **without** the hassle of installing software on each database server.

**Native support.** The dbWatch Engines are programmed in the native programming language for each supported database (PL/SQL for Oracle, T-SQL for MS SQL and Sybase, etc.). Since this is a language you are already familiar with, you will not need new training or external consultants. This also makes the dbWatch engine truly platform-independent and much easier to manage.

**Open and extensible.** The dbWatch Engines code base is fully open. You can read, edit, or modify the code exactly the way you like. And most importantly, you can create monitoring procedures and jobs that are fully customized to your work needs or your business processes.

The combination of the following features gives you a variety of advantages that no other database monitoring solution can:

- The most advanced monitoring possible—if you cannot do it in the native procedure language, you cannot do it at all.
- Fully self-service—create and modify your monitoring activities precisely how you want them to be!

### dbWatch Control Center Server

The ***dbWatch Control Center*** Server is the nerve center of the dbWatch infrastructure.

***dbWatch Control Center*** Server connects and manages all dbWatch Engines and is used for the following:

- Configuring and scheduling monitoring jobs
- Alert Messaging—SMS, email, third-party tools
- Reporting—configuring, creating, generating, and distributing reports
- User administration, role-based access controls
- Security handling – encryption, certificates
- Kerberos integration
- Auto-scanning for new instances

**Scheduling and triggering monitoring jobs.** Each dbWatch job comes with a default schedule. ***dbWatch Control Center*** server lets you easily configure these schedules and triggers to fit your requirements and preferences (the crontab format may be new to MS users, but explanatory text fields are included).

**Alert Messaging.** ***dbWatch Control Center*** server is used to specify alert messaging and routing. You can configure alarms to be sent to one or multiple destinations:

- ***dbWatch Control Center*** client
- Email
- SMS
- Third-party system management platform

***dbWatch Control Center*** alert messaging is entirely flexible, allowing you to configure different messaging rules depending on the day of the week, hour, calendar date, etc., to support the shift schedule of your IT management processes fully.

**Platform.** While ***dbWatch Control Center*** comes complete with all the monitoring alerts, maintenance tasks, and reports that most users need, we recognize the need for some users to adapt and extend the tools for unique requirements. ***dbWatch Control Center*** is delivered with an integrated development environment (IDE) and the source to all monitoring jobs so each DBA can easily modify, extend or create new jobs, procedures, and reports. ***Control Center*** also includes a command line interface (CLI) and farm data language (FDL) for querying across multiple instances and versions.

## UX Client

The ***dbWatch Control Center*** client provides the graphical user interface for the dbWatch user with a highly intuitive and easy-to-use structure.

The client provides a complete overview of all monitored databases in a single standard interface. For ease of use, instances can be given names and properties, grouped, sorted, filtered in any way so each view matches the local needs and makes operations easier.

The complete user interface is customizable through FDL. You can read about it by following the link.

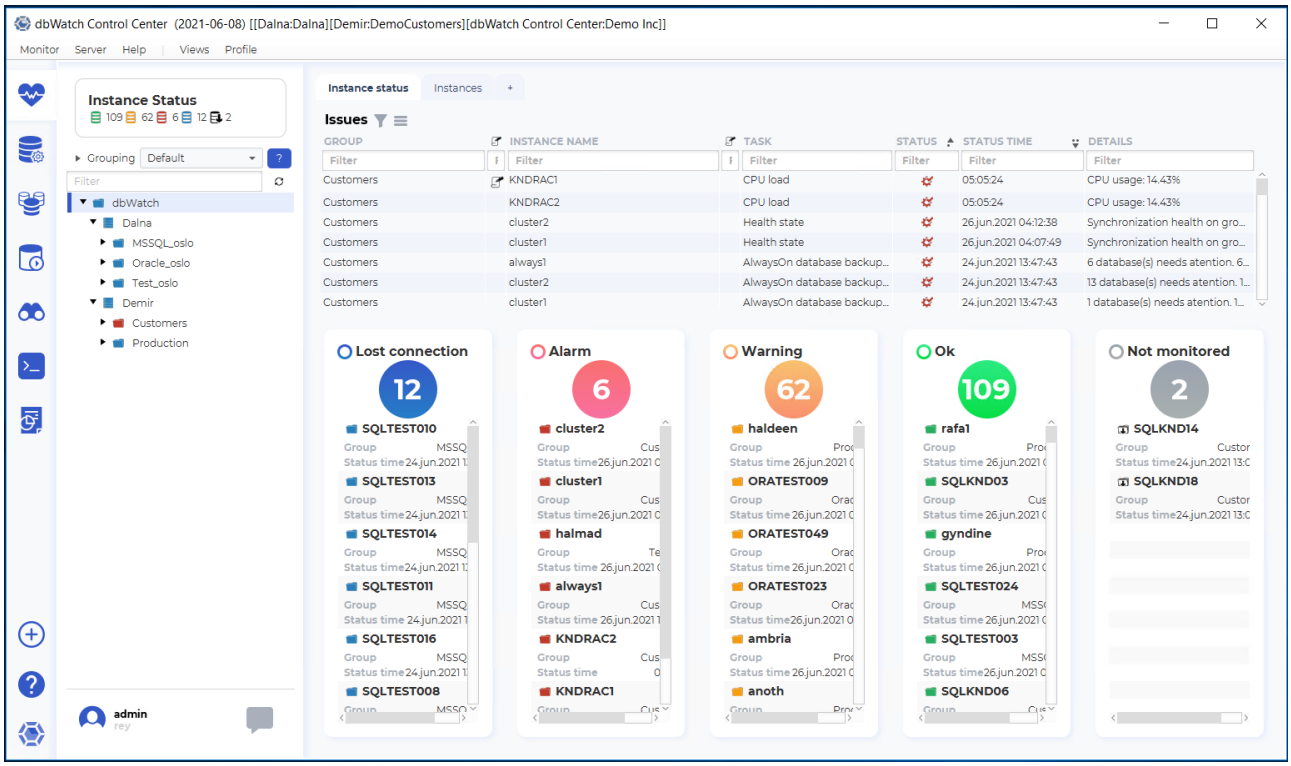



*Figure 2: Instance Status Overview – Job Status and Alarms*

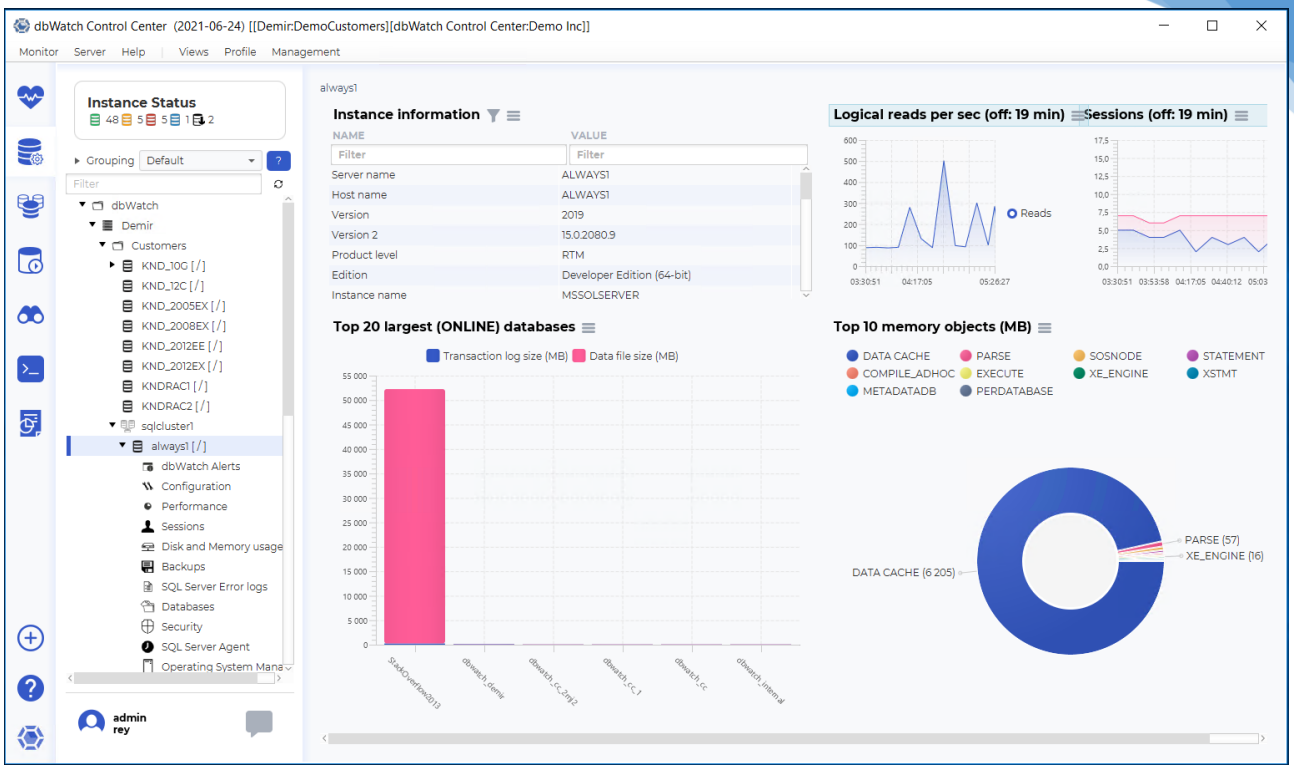



*Figure 3: Single Instance - Performance dashboard*

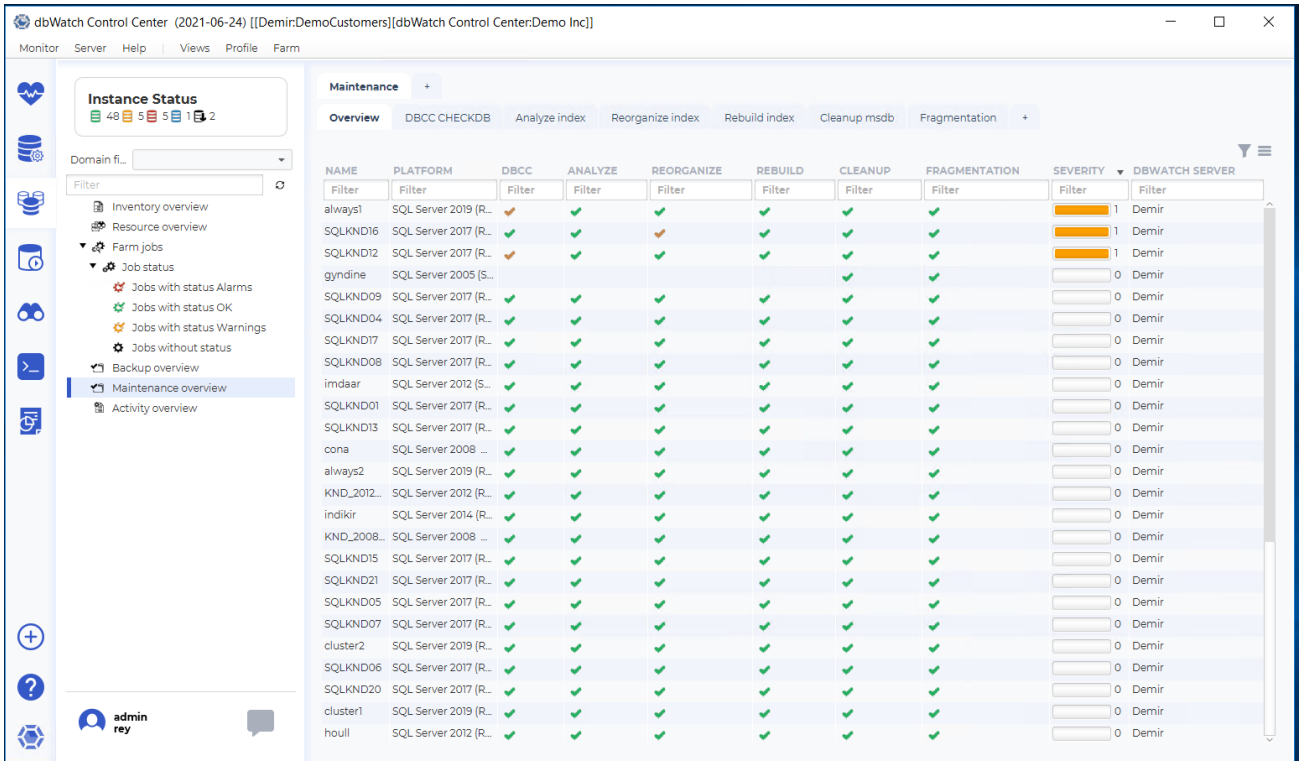



*Figure 4: Farm View - SQL Index and DB Maintenance Overview*

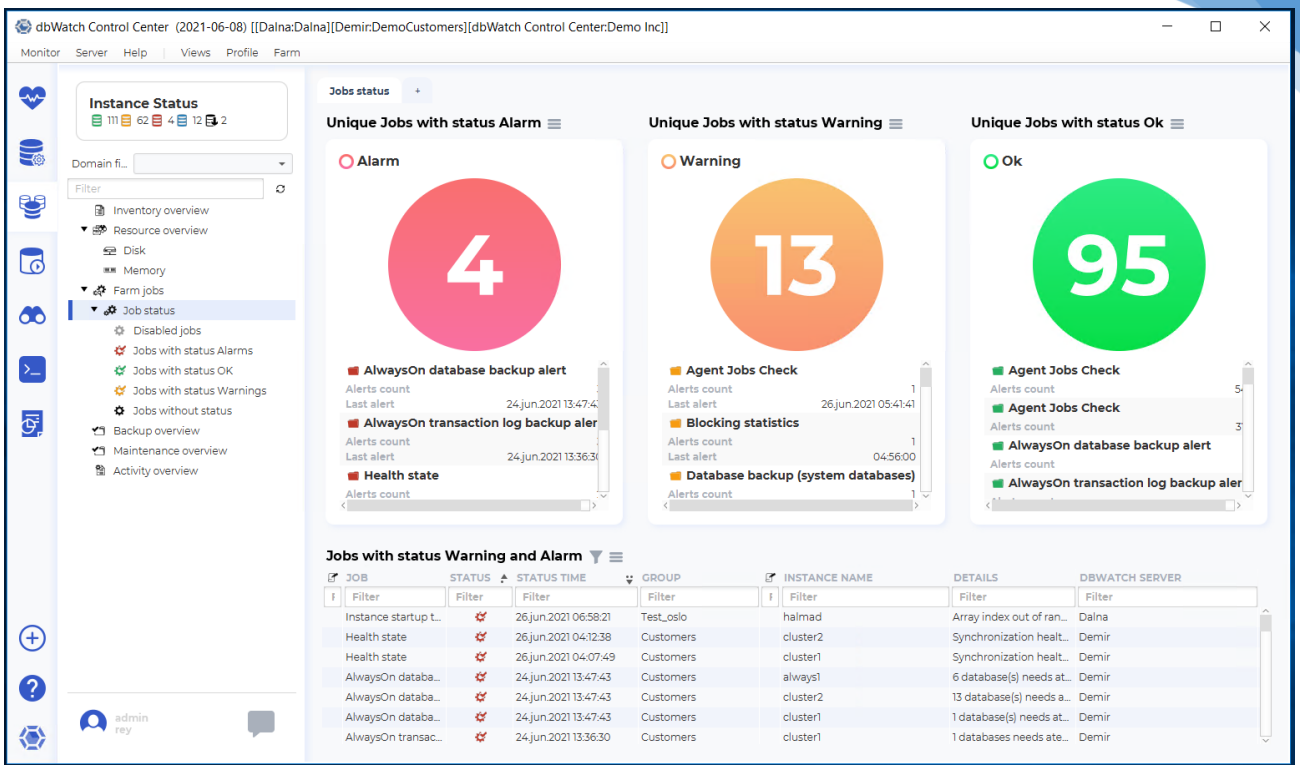



*Figure 5: dbWatch Control Center Farm View - Jobs Status Farm Overview*

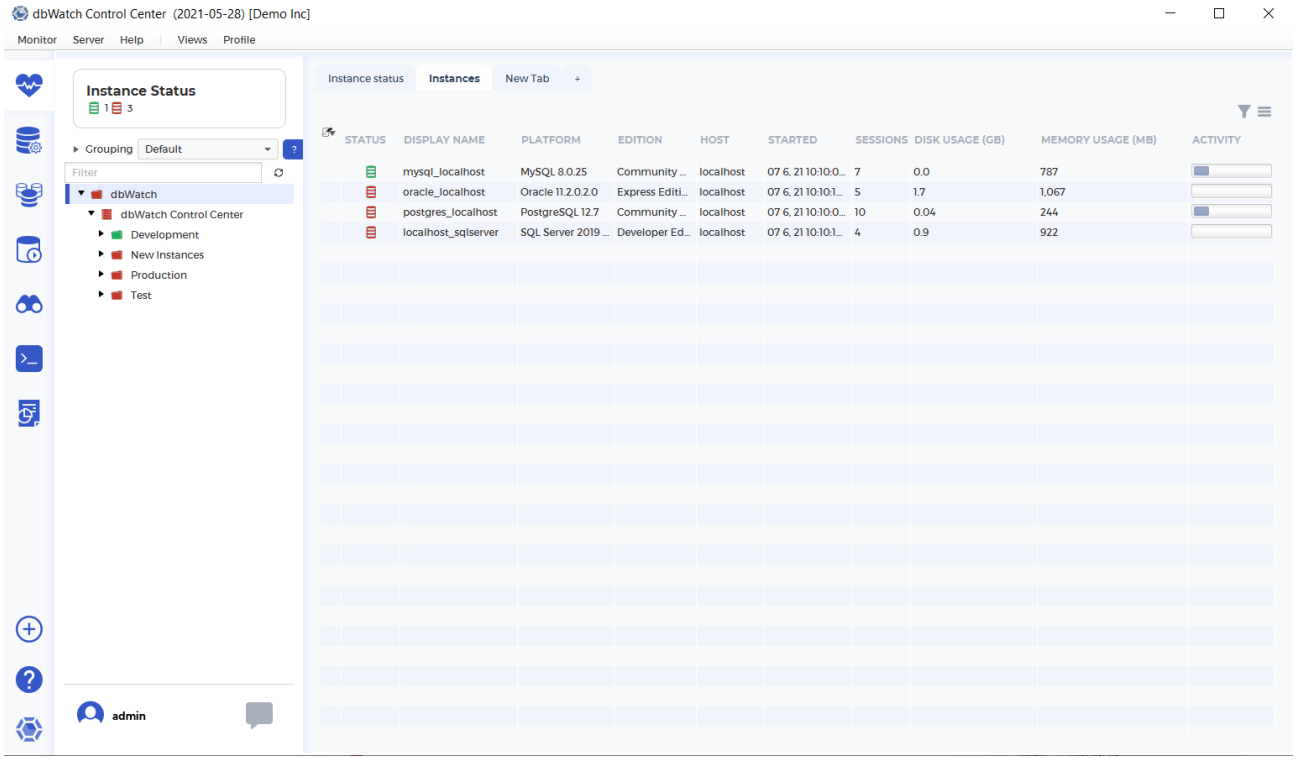



*Figure 6: Instance View - Monitoring Instance Activity, Memory, and Sessions*

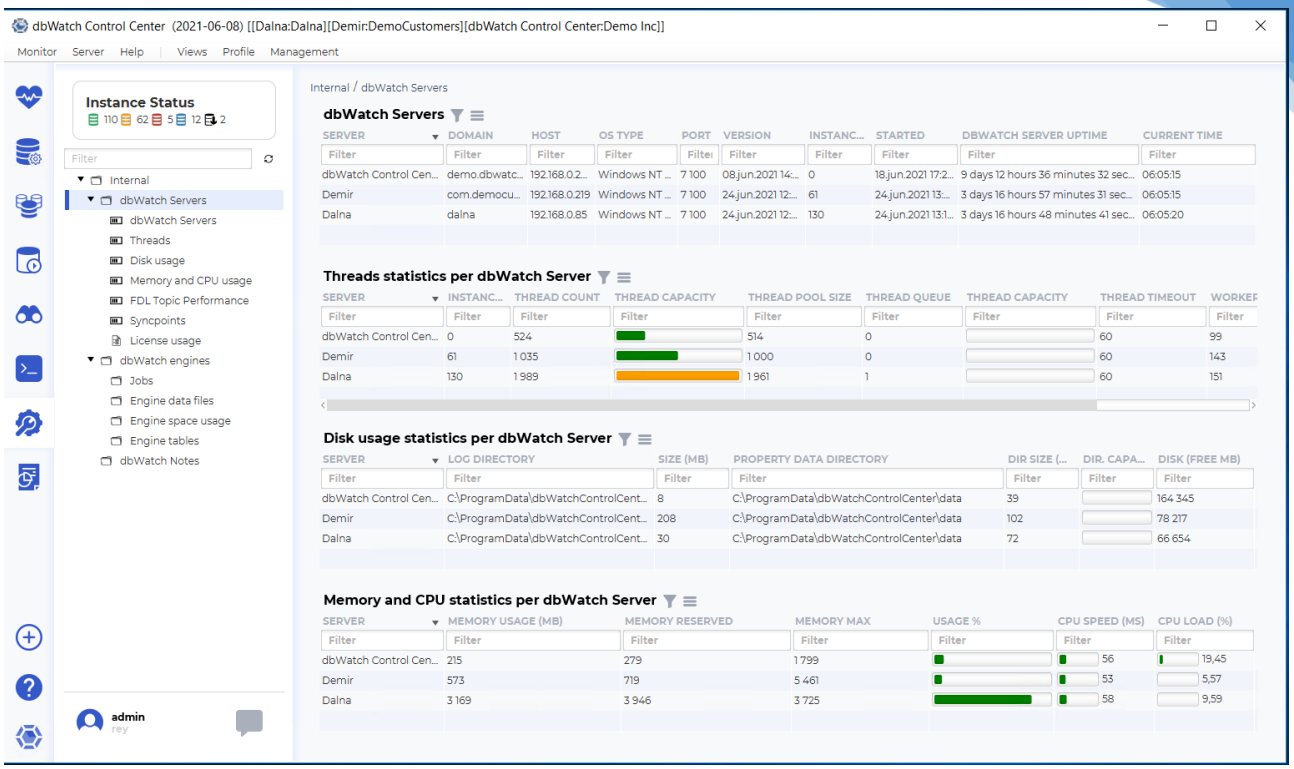



*Figure 7: dbWatch Internal – seeing other dbWatch Control Center servers*

# CHAPTER 5 DISTRIBUTED MONITORING

In large or complex environments, deploying multiple dbWatch servers and connecting them together in a single monitoring view is sometimes needed.

This need can arise when you:

- Need to monitor more than 250 instances (windows)
- Multiple locations/data centers
- Have subnets with servers behind firewalls
- Multiple organizations/customers/units
- Need to minimize network/Firewall traffic
- Need Redundancy

***dbWatch Control Center*** has supported multiple monitoring/management servers for a long time. This can have numerous benefits:

- Scales to thousands of instances
- Simplify access to instances behind firewalls
- Reduce network traffic
- Redundancy
- Data and stats are cached locally on each server

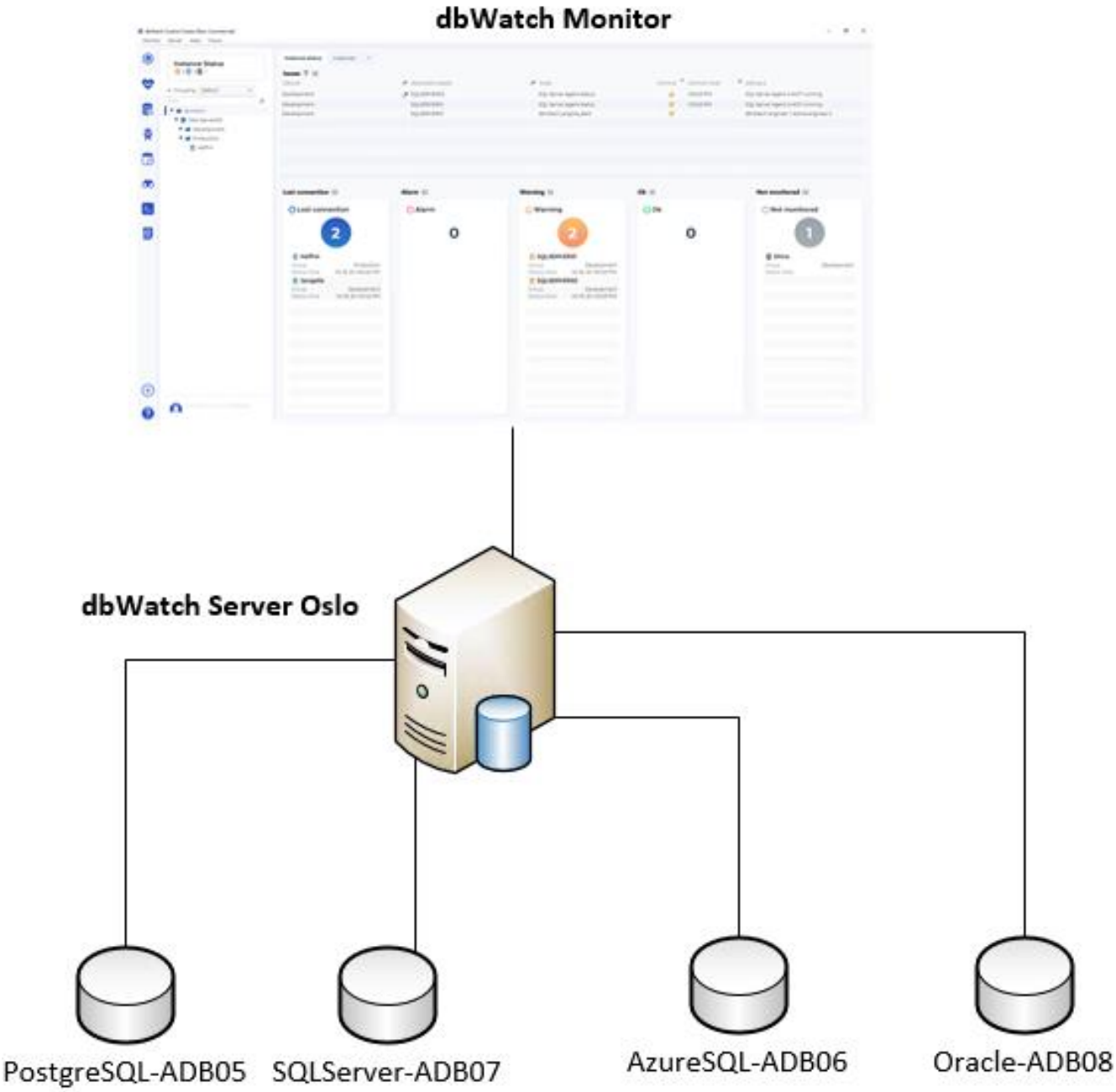



*Figure 8: Normal, single server configuration. Scales to 250 (windows) instances*

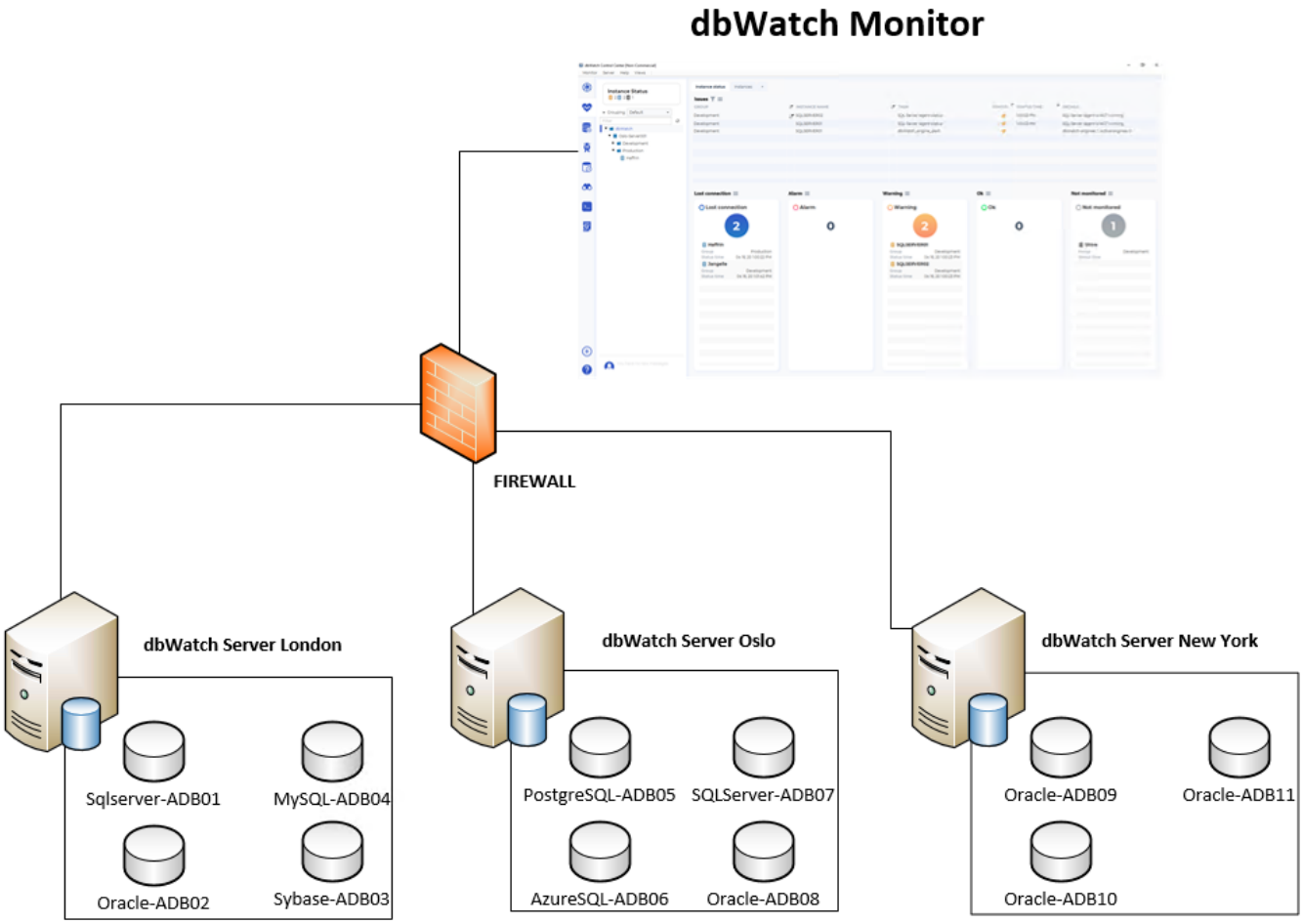



*Figure 9: Multiple dbWatch servers connected in a hierarchy to serve multiple locations or subnets. Excellent scalability!*

# CHAPTER 6 FUNCTIONAL MODULES

The following chapter describes the unique ***dbWatch Control Center*** architecture and the relations between the individual components in the platform.

### dbWatch Control Center on Instance and Database monitoring

**Monitoring Module** provides a wide range of monitoring jobs. These jobs provide statistics and growth rates for your database, allowing for better planning and performance analysis of your system's behavior. It also provides alarms and warning that enables you to react to problems as quickly as possible. The Monitoring module offers an easy-to-use interface for configuring and controlling the individual monitoring jobs and provides an interface for changing and developing your custom monitoring.

### dbWatch Control Center on Instance and Database Management

**Management module** provides an administration GUI to do the day-to-day administrative work for you (DBAs). Unique to ***dbWatch Control Center,*** it provides a set of different interfaces. This allows you to tailor the management interface depending on what work a particular user is allowed to do. You can give some more sensitive and complex administration privileges and less complex interfaces with limited possibilities to others. You can even edit your configuration to add new possibilities on your own if you have the privilege.

### dbWatch Control Center for Database Farm Reporting

**Report module** is a powerful tool that lets you automatically generate and distribute reports in html or pdf formats to designated recipients. The report module comes with standard DBA reports for each platform. The real power of the report module lies in customization—the ability to create your own set of reports, fully customized to fit your needs, those of your organization, or even your external customers. With the Report module, you can report any data or process ***dbWatch Control Center,*** monitors. Data presentation formats, default texts, logos, and graphics are configured exactly according to each report's needs.

Report module automatically triggers reporting procedures using data stored locally in the distributed dbWatch Engines. Data results are then centrally collected, processed, formatted, and distributed by ***dbWatch Control Center*** server to designated recipients according to your schedules.

Report module automates the entire reporting process, eliminating the need for unnecessary manual reporting routines and activities.

***dbWatch Control Center*** includes a broad range of standard reports out of the box. You can create customized reports with your logos, in-house default texts, charts, and tables.

You can automatically generate and distribute reports electronically at pre-set schedules in HTML or pdf formats.

**SQL Worksheet** is a powerful, fully cross-platform SQL tool that allows you to simultaneously execute commands or perform SQL queries across multiple databases, regardless of platform.

With SQL Worksheet, you can easily compare query results across your database environment, no matter how large. Ingeniously simple, SQL Worksheet will relieve headaches and save you valuable time from unnecessary manual labor working in large environments.

# CHAPTER 7 SCALABILITY AND LARGE DATACENTER FEATURES

**dbWatch Control Center** is designed from the ground up to handle large environments. ***dbWatch Control Center*** is used to manage anything from a handful to more than one thousand database server instances at a time in the largest enterprise and service provider environments.

To work efficiently in the largest environments ***dbWatch Control Center*** has several unique features:

- Distributed, scalable architecture. Agents are distributed on each instance, and statistics are kept locally on each instance. This avoids building huge central repositories
- Each instance can have its own set of user-defined properties and tags. This makes it easy to attach meaningful information to each instance, so the DBAs know the function and role of each instance, helping them understand the usage patterns and priorities of each.
- User-defined grouping of instances
- Filters to select instances
- Group actions. Perform a query, report, or add/change agents and tasks on selected groups of instances
- Resource reports give a complete in-depth overview of all instances, capacity, utilization, etc.
- Bulk import of instance information
- Auto-scan for new instances
- Ability to distribute ***dbWatch Control Center*** servers in subnets to obey firewall and security rules in a secure, controlled manner

# CHAPTER 8 ADVANCED FEATURES

### Cluster management

***dbWatch Control Center*** supports AlwaysOn clustering with its recent release. Although, it is still fully polished for Oracle RAC and Microsoft as of the moment.

### Security

***dbWatch Control Center*** implements several technologies and methodologies to support use in secure environments like defense, police, hospitals, and banking:

- Role-based, fine-grained access controls
- Encrypted connections using certificates
- SQL Authentication
- Kerberos

### Consolidation support

***dbWatch Control Center*** can analyze the complete set of instances and offer information and advice on server consolidation:

- Detect inactive databases
- Analyze server software, load, resource/capacity utilization
- Provide recommendations as to which instances are candidates for consolidation or should best be kept separate

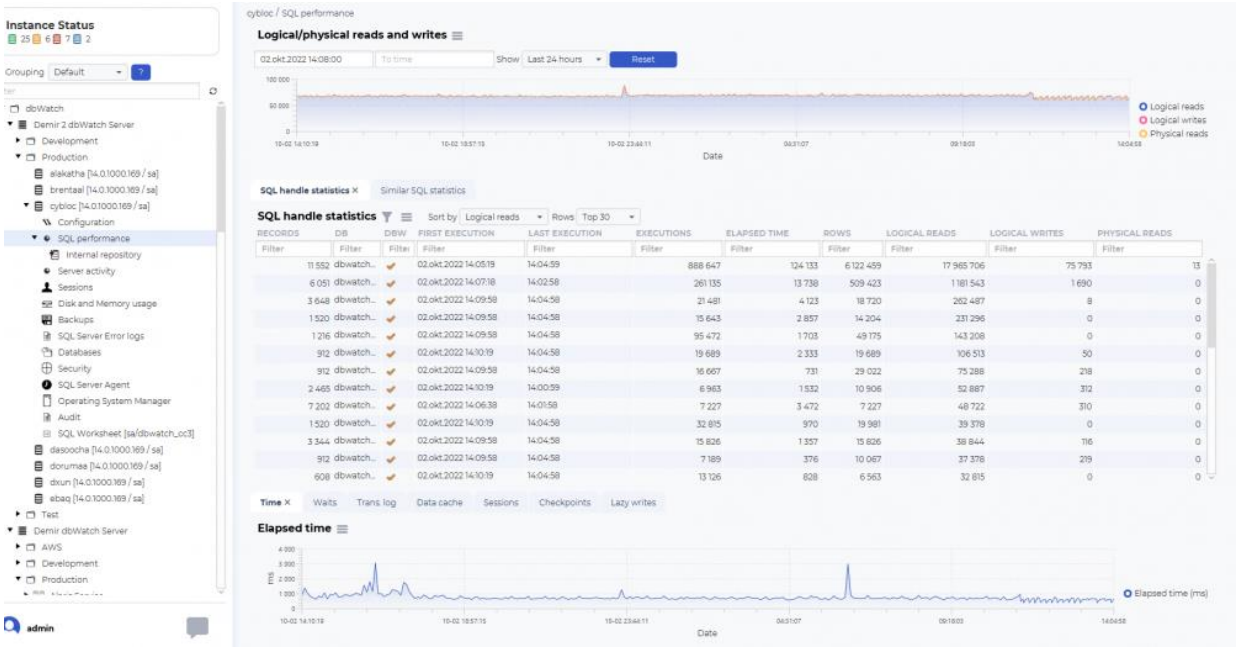
## SQL Performance pack

The latest feature of dbWatch Control Center allows for historical monitoring and playback analysis of SQL Statements in the database instance. It helps thorough investigation of any problematic queries that have been executed at a specific time.

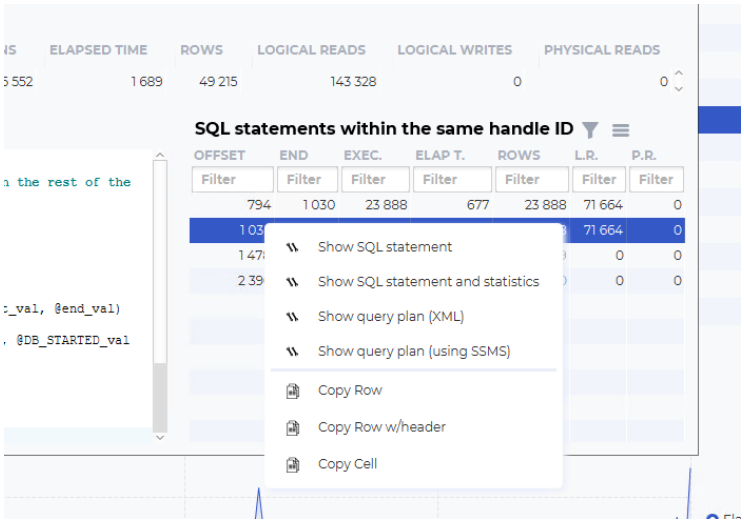
It currently supports MS SQL Server 2014 up to the newer versions and Oracle 11g and the latest version for Oracle.

- Drill down on query performance
- Analyze extensive resource queries

Using the SQL performance pack helps you quickly identify any queries causing a significant impact on your database performance.




Drill down on your performance. This dashboard will show logical/physical reads and write statistics for this statement. You could see the whole query and the query plan it used.



# CHAPTER 9 CUSTOMIZATION AND DEVELOPMENT

While ***dbWatch Control Center*** is delivered complete and ready to use, and 90% of ***Control Center*** users use it as provided, we do recognize that sometimes there is a legitimate requirement for modifying, extending, or customizing ***dbWatch Control Center*** to local needs. For this reason, we offer a complete and comprehensive set of development and customization tools and options:

- All performance jobs are written in native database programming language and delivered in source form. They can be modified or extended by developers or DBAs in the native development environment
- All user-interface is defined in XML and may be modified by the customer
- All standard reports are source form and may be modified or extended.
- A command-line interface (CLI) is available so that most ***dbWatch Control Center*** functions can be called from scripts.
- The very powerful and flexible internal dbWatch Farm Data Language FDL is available for developers and DBAs

Competent users can modify, add to, or extend almost all you see in dbWatch Control Center. For complete information, see the dbWatch support pages and online documentation.

# CHAPTER 10 RELEASE AND VERSION INFO

The latest major ***dbWatch Control Center*** is version 501, released last September 29, 2022.

The following is the overview of some of the new features and functionality in the latest dbWatch Control Center version.

**New features**

- Global views for performance, capacities, and maintenance
- Oracle and SQLServer performance pack/playback
- Revamped User Interface
- Farm Management Module
- Customizable dashboards in the Management module
- Support for grouping, filtering, and search for instances
- Support for monitoring instances without installation
- Major upgrade of the PostgreSQL support
- Support for AlwaysOn cluster
- Performance report for Oracle
- Schedule reports with different users
- Farm Data Lanaguage (FDL)
- Command line (CLI) support
- Auto-discover instances – add, modify and delete
- Added time topic for server
- Support Multiple dbWatch Server connection
- Improved "Connected users" view
- New "Internal engine files" views (MS SQL Server, Oracle)
- Internal Messaging system for users

For more information on the previous versions and releases, you can check the release notes in our online documentation. You can also check the version summary to track the recent release.

# CHAPTER 11 TECHNICAL SPECIFICATIONS

The following sections specify the technical prerequisites for using the dbWatch platform.

### Supported Database Platforms

dbWatch supports the following databases for its most recent release:

- **Oracle**: 8i, 9i, 10g, 11g, 12c, 18c, 19c
    - **Standard edition and Enterprise edition**
- **MS SQL Server**: 2000, 2005, 2008, 2012, 2014, 2016, 2017, 2018, 2019
- **Sybase**: 12, 15
- **MySQL**: 5.0 and later
- **MariaDB**
- **PostgreSQL**: 8.2 and later

### Technical Requirements

**a. dbWatch Control Center server**

- Windows (VMWare virtual server supported)
- 8 GB RAM recommended
- 2 GB HD Space
- Installs in under 15 minutes

**b. dbWatch engine (per instance)**

- 500 Mb free space in each database instance recommended
- Bulk install for large database environments
- SA, SYS, or other superuser password is required for each engine installation
- Installs in under 2 minutes per instance

**c. dbWatch client**

- Windows
- 500 Mb hard drive space
- Java support
- 4 Gb memory
- Client - Server communication requires a single port only

# APPENDIX A PRE-CONFIGURED MONITORING PROCEDURES

dbWatch delivers pre-configured monitoring procedures based on best practices for each supported database platform.

## Oracle

Blocking detector
Buffer cache statistics
Memory statistics
Redo statistics
Session load
Wait statistics
File I/O statistics
Open cursors check
Disk read statistics
Latch statistics
SQL Statements statistics
SQLStatistics
Undo statistics
DML Performance
RAC Monitoring
Flash recovery area usage
Free extents check
Segment size collector
Segment size status
Tablespace check
ASM disk statistics
ASM diskgroup check
Job scheduler
Availability check
Alert log check
RMAN Backup check
CPU Load
Network statistics
Top user memory usage
User memory statistics
Oracle License information
Auto extensible data files
Temp tablespace usage
Backup log check
Export log check
File status check
Listener log check
Listener status check
Data Guard archive check

## MS SQL Server

Blocking detector

Data hit ratio

Session load

SQL statements statistics

SQLStatistics

Index usage statistics

External fragmentation

File I/O stats

DML Performance

DB growth rates

Disk space check

Filegroups growth rate

Transaction log size

Transaction log space usage

Agent jobs check

DB uptime

SQL Server agent status

Database disk space usage

Internal fragmentation

Memory object statistics

Transaction log backup check

Backup all databases task

Datafile size check

Database mirroring

Log shipping monitor

Database status

Database backup check

## Sybase

Data cache monitor

Disk activity monitor

Engine CPU monitor

System monitor collector

Procedure cache check

Session load

Database space check

Database growth rate

Database uptime

## MySQL

Memory setup

Session load

Temporary table check

Binlog cache check

Innodb buffer pool check

Database load

Lock statistics

Database growth rate

Key buffer check

Network traffic

Query cache

Thread cache

Temp table check

Database uptime

## PostgreSQL

Analyze check

Disk block hit rate

Locks held

Index block hit rate

Database growth rate

Log size statistics

Tablespace

Vacuum check

Database uptime

Daily analyze job

Schema growth and info

Session load

Table and index statistics

Transaction statistics

Backup check (pg_dump)

Go to **https://wiki.dbwatch.com/ControlCenter/** for detailed information about each procedure.

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